DOCUMENT RESUME

ED 156 682 TM 007 081

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TITLE Cognitive and Political Attitude Correlates of the Defining Issues Test.
PUB DATE [77]
NOTE 19p.

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *Attitude Tests; Cognitive Development; *Comparative Testing; Comprehension; Correlation; *Developmental Stages; Ethical Values; Ethics; Higher Education; Maturity Tests; *Moral Development; *Moral Values; Political Attitudes; Response Mode; Response Style (Tests); Secondary Education; Social Values; Student Attitudes; Test Validity
IDENTIFIERS Comprehension of Social Moral Concepts Test; *Defining Issues Test; Kohlberg Moral Judgment Scale

ABSTRACT

The Defining Issues Test (DIT) has been subjected to construct validation in a number of studies relating it to the development of moral judgment and to measures of cognitive development and political attitudes. The DIT has been found to have significant positive correlations with the Comprehension of Social-Moral Concepts Test for a variety of samples of students and adults. A longitudinal study showed scores on both tests increased over time. A number of studies also showed significant positive correlations of the DIT with Kohlberg's Moral Judgment Scale under several different scoring methods. The DIT is essentially a recognition task whereas Kohlberg's test requires subjects to produce and justify an answer, which may account for differences in the developmental level of responses between the tests. The DIT also has positive correlations with other measures of cognitive development. Negative correlations were found between the DIT and authoritarian attitudes as indicated by the Law and Order Test. Correlations of the DIT with other measures of political attitudes are generally lower and inconsistent. (Author/CTM)

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Cognitive and Political Attitude Correlates of the Defining Issues Test

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One facet of construct validation is the examination of correlational relationships of the Defining Issues Test (DIT) with other psychological measures. As Mischel (1976) and Alston (1971) have pointed out, age trends do not completely validate a measure of moral judgment. More is implied in the cognitive developmental notion of moral judgment than just that there are age trends. Exploring some of those additional implications, this paper summarizes data from about 40 studies on the correlations of the DIT with cognitive developmental measures, IQ and academic achievement measures and political attitudes.

One question of major theoretical interest is whether changes in moral judgment reflect changes in a person's capacity for higher stage thinking. Merely showing that people's thinking does change over time does not demonstrate that their capacity has changed over time. It could be (as a logical possibility) that young children have the capacity to think in the higher stages but that they choose not to do so; cross sectional or longitudinal change on measures of moral judgment might only represent changes in preference for certain kinds of thinking rather than increasing cognitive capacity.

In order to examine cognitive capacity, a different kind of measure is required than either the DIT or Kohlberg's test. It is for this purpose that the test of moral comprehension was devised. Table 1 gives an

example of the moral comprehension test devised by Rest. The subject is presented with a paragraph and then below that paragraph are four statements. The subject's task is to select from the four statements the one which best reflects the meaning of the paragraph. Note that the subject is not asked whether or not he agrees with the paragraph or the statements; the subject's job is to decide which statement comes closest in meaning to the paragraph. It is presumed that those subjects who correctly match the statement with the paragraph understand the concept illustrated in the paragraph. Eleven paragraphs are used in the Moral Comprehension Test, illustrating concepts such as social contract, legitimate authority, autonomous thinking based on principle. Comprehension scores range from 11 to 0, depending on the number of correct matches that the subject makes. Moral philosophy and political science doctoral students (our "expert" group) consistently choose the alternatives which are keyed as correct, and other groups of subjects get lower scores.

Insert Table 1 about here

Table 2 shows the correlations of moral comprehension with the DIT. In all but one comparison, the correlations were significant. In heterogeneous groups, the correlations go into the .60's, but in more homogeneous groups the correlations are lower. In the sample of 73 9th graders, the correlation between the DIT and comprehension was .50 after age was controlled and IQ, socio-economic class, and sex were statistically partialled

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Insert Table 2 about here

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out. In the longitudinal study reported by Rest (1975, 1977), comprehension increased significantly just as did the DIT--as comprehension went up, so did the DIT: Comprehension scores went from an average of 5.1 to 7.3 between 1972 and 1976, $t = 6.8$, $p < .001$. Of the subjects who showed upward movement across DIT testings, 81% also increased in comprehension. In summary, moral comprehension--a test of cognitive capacity--is fairly well related to DIT scores.

A second question of interest is how the DIT is related to Kohlberg's test of moral judgment. Since the DIT is derived from Kohlberg's approach and his characterizations of stages, we would theoretically expect the two measures to be related. Also, it is of practical interest to know whether the DIT is an equivalent test to Kohlberg's. Table 3 indicates that correlations in several studies ran as high as the .70's. The highest correlations occurred with heterogeneous subject groups. In more homogeneous groups, the correlations were considerably lower. In general, the various forms of Kohlberg's test (or tests derived from Kohlberg's test) seem to be related to the DIT, but not closely enough to regard the measures as equivalent.

Insert Table 3 about here

Alozie (1976) has done the most intensive comparison of the DIT and Kohlberg's test. At first Alozie determined how much difference between the DIT and Kohlberg's test could be attributed to certain design differences in the tests. For one, the DIT uses a somewhat different set of hypothetical dilemmas than Kohlberg's test. Both Kohlberg's test and the

DIT use the familiar Heinz and the Drug dilemma, but the measures match on only half of the dilemmas. Alozie's findings indicate that the correlations between the DIT and Kohlberg's test weren't much higher for the matching dilemmas than for the dilemmas that differ.

Secondly, Alozie examined the effect of some differences in stage characterizations. Rest has defined the six stages somewhat differently than Kohlberg, and therefore some DIT items are stage keyed differently than they would be within Kohlberg's present system. Accordingly, Alozie went over DIT items and rekeyed items to conform more closely with Kohlberg's stage definitions. Alozie, however, found that changing the stage definitions of some DIT items did not improve the correlations with Kohlberg's test, but in fact lowered the correlations a little bit.

Thirdly, Alozie checked out the effect of each test using a different kind of index: Kohlberg's test uses stage typing and the moral maturity score; the DIT uses the P score. Alozie asked if computing similar indices for both tests would give a higher correlation between the tests. Table 4 shows how the various indices correlate. We see that the P index for the DIT and the moral maturity score from Kohlberg's moral judgment interview give the highest correlation, .75--therefore equating the two tests on type of index used does not improve the correlation between them. (It should be noted at this point that Davison's new index was not available at the time of this study, and we don't know how that compares as yet.)

Insert Table 4 about here

Alozie concluded that these design differences in the tests don't account for much of the difference between them. Alozie then examined the most striking difference between the two tests: the tendency for the DIT to score higher than Kohlberg's test. In fact, because the DIT credits subjects with much higher thinking than Kohlberg's test some researchers have doubted that the DIT could be measuring moral judgment at all. Kohlberg has recently said that principled moral thinking does not occur until adulthood, and even then it is a rarity. However, the DIT has even junior high students attributing some importance to principled thinking, and on the DIT, principled thinking is not a rarity at all.

Alozie carefully examined scores from Kohlberg's test and scores from the DIT for each subject. He found that on the average, Kohlberg scores were almost two stages below DIT scores (Table 5). For instance, Alozie examined Kohlberg scores on the subject's responses to the Heinz dilemma. Alozie found that subjects did not tend to pick DIT items at the same stage as on the Kohlberg test, but tended to pick items at stages above. Alozie found that in 77% of the comparisons, subjects chose DIT items that were at stages higher than the stage scores on the Kohlberg interview.

Insert Table 5 about here

This discrepancy between the DIT and the Kohlberg test has parallels in Piagetian research and in other areas of social cognition. The DIT is essentially a <u>recognition</u> task whereas Kohlberg's test requires subjects to verbally produce and justify an answer. With such a difference in response mode, it is not unusual in cognitive developmental research to

find that the recognition task (the DIT) is easier for subjects than the production task (the Kohlberg test), and to find that the DIT credits subjects with higher level thinking earlier than the Kohlberg test.

In conclusion, the DIT and the Kohlberg tests are not interchangeable although the correlations between them are consistently positive and usually significant.

The DIT is correlated with other measures of cognitive development which are not distinctively measures of moral judgment. As Table 6 shows, these relationships are generally positive, but not as high as the DIT's correlations with measures of moral cognition. In addition, there is data on about 50 correlations of the DIT with IQ measures and measures of academic achievement and grades. Space does not allow detailed discussion of these correlations, but they are generally positive, significant, and in the .20's and .40's range. Again this is evidence of a relationship of cognitive capacity with the DIT, however, the magnitude of these correlations with IQ, etc. is less than that of the DIT with measures of moral cognitive development.

Insert Table 6 about here

A third question that correlational data can help address is whether the DIT is measuring a value-free, purely intellective skill, or whether the DIT has anything to do with values. One measure is the "Law and Order" test, devised by Rest (Table 7). The Law and Order test asks subjects to take a stance on current controversial issues of public policy. Several

studies have reported significant correlations of the Law and Order Test with the DIT (Table 8). Of the ten correlations, nine report a significant

Insert Tables 7 and 8 about here

correlation: the higher the DIT score, the less tendency for a subject to endorse value positions that attribute almost limitless power to authorities or that value maintenance of social institutions at high costs to individual welfare and freedom. In Rest's longitudinal study, as DIT scores went up, Law and Order scores were down ($t = 4.2$; $p < .0001$). Of subjects who increased on the DIT, 84% decreased on Law and Order.

Correlations of the DIT with other measures of political attitudes are generally lower and inconsistent. For instance, correlations with measures of Political Efficacy, Political Interest, Political Tolerance, Hogan's Survey of Ethical Attitudes, Rokeach's Dogmatism, etc. are inconsistent and usually not very large. Table 9 provides an overview and references for many of these measures.

Insert Table 9 about here

Other questions regarding the relationship of the DIT to values, attitudes, and behavioral acts are further discussed by Jacobs and McColgan.

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Table 1

Sample Comprehension Item

If Heinz steals, he is breaking his agreements with other members of society. In most countries men have agreed not to steal because they see that not stealing is better for each one of them. Heinz himself would have to admit that a law against stealing is a good law to have. And so if Heinz wants to have laws that he and other people think are good to have, he should abide by them.

____ Good	____ Fair	____ Poor	a.	Men consent to laws because they recognize that in the long run laws benefit each member of society. One's obligation to obey the law comes from this recognition.
____ Good	____ Fair	____ Poor	b.	Heinz should not steal because if he does, people will think he has broken his agreements with them, and they would regard him as untrustworthy.
____ Good	____ Fair	____ Poor	c.	Once the law is set, no one is right in breaking it. No matter what good intentions a person may have, if he breaks the law, he's in the wrong.
____ Good	____ Fair	____ Poor	d.	Heinz has a duty to obey the law because he helped to make the law. If he breaks his agreements, he will be setting an example that could lead to everyone's breaking the law.

Rank the statements from best interpretation of the paragraph (1), to worst.

1. _____, 2. _____, 3. _____, 4. _____

Table 2

Correlations of DIT with Moral Comprehension

Study	Sample	r
Alozie, 1976	91 junior highs and college students	.68
	(37 college students only	.46)
Rest et al., 1974	67 Ss, ages 14 to adulthood	.67
	160 Ss, junior high to graduate school Ss	.62
	(9th graders only, n = 73	.58)
Coder, 1975	87 adults (age 24 to 49	.49
Rest, 1975	88 Ss, age 17-20	.42
Masanz, 1975	34 high school girls	.37
McColgan, 1975	52 junior high predelinquents and controls	.34
	29 delinquents	.19

Table 3

Correlations of DIT with Kohlbergian Tests of Moral Judgment

Study	Sample	Measure	r
Alozie, 1976	91 Ss, combined group (37 college Ss (52 junior highs	Kohlberg's 1972 Issue Scoring	.75 .28) .21)
Gibbs & Fedoruk, 1975	41 college students	Gibbs' scale of principled moral thinking	.70
Rest et al., 1974	47 students & adults	Kohlberg's 1958 Scoring System	.68
Froming & McColgan, 1977	81 adolescent boys & 163 college Ss	Kohlberg Scoring System (recent version)	.65
McColgan, 1975	29 delinquents	Kohlberg's 1972 Issue Scoring	.37
Carroll & Rest, 1977	88 Ss, 18-22 Yr.-old Ss	Written and modified version of Kohlberg's 1972 Scoring System	.34
	55 Ss, 20-24 yrs.	Kohlberg's 1972 Scoring System	.41

Table 4

Correlations of the Kohlberg Test

with the DIT on Three Indices[a]

	Kohlberg Test		
DIT	P	MMS[b]	Stage Typing
P	.45	.75	.64
MMS	.42	.72	.66
Stage Typing	.33	.61	.55

[a]From Alozie, 1976.

[b]Moral Maturity Score.

Table 5

Percent Subjects Scoring Higher, Same, or Lower on DIT than on the Kohlberg Test[a]

Story	Higher on DIT	Same on DIT and Kohlberg	Higher on Kohlberg
Heinz	64	27	9
Doctor	71	14	7
Prisoner	87	6	8
Total	77	16	8

Note. n = 91

[a]From Alozie, 1976.

Table 6

Correlations of DIT with Other Cognitive Developmental Measures

Study	Sample	Measure	r
Briskin, 1975	32 college Ss	Leveling-Sharpening	.49
Meyer, 1975	40 male college Ss	Perry's Intellectual & Ethical Development	.45
Panowitsch, 1976	82 college Ss	Cornell Critical Thinking Test	.41
Cauble, 1976	90 college Ss	Piaget's Formal Operations	.40
McColgan, 1975	29 delinquents	Piaget's Golden Rule Task	.30
	52 predelinquents	Piaget's Golden Rule Task	.31
	52 predelinquents	Chandler's Cartoon Role-Taking	-.18
Copa, 1975	127 college women in home ec. classes	Harvey's Conceptual Systems	.13

Table 7

Sample Law and Order Item

Under present laws it is possible for someone to escape punishment on the grounds of legal technicalities even though the person may have confessed to performing the crime. Are you in favor of a thougher policy for treating criminals?

_____strongly agree with tougher policy
_____mildly agree
_____mixed agreement and disagreement
_____mildly disagree
_____strongly disagree

If a person is against a war that his country is engaged in, is it right to do things which disrupt the war effort (like destroying government records, disrupting government buildings, demonstrating at army installations, etc.)? (Check one)

_____never right
_____sometimes right
_____right most of the time
_____don't know

Table 8

Correlations of DIT with Law and Order Attitude Test

Study	Sample	r
Rest et al., 1974	160 students--jr. high to grad Ss	-.60
	(73 junior highs	-.23)
	65 students--jr. high to adults	-.48
Rest, 1975	88 Ss, 16 to 20 yrs.	-.52
Coder, 1975	87 adults	-.49
Rest, 1977	55 Ss, 18 to 22 yrs.	-.47
Panowitsch, 1975	44 college Ss	-.27
Masanz, 1975	34 high school girls	-.19

Table 9

Attitude Correlates of DIT

Study and Sample	Attitude Test and Variable	Correlation
Allen, 1976	Dean alienation scale:	
	-Powerlessness	.04
	-Normlessness	.18
	-Social isolation	.06
410 9th graders	Political efficacy	.16
	Political trust	-.03
	Salience (interest in political courses)	-.08
	Political aspiration	.01
Coder, 1975		
58 adults	Radical-conservatism scale	.13
Gallia, 1976		
10 college science majors	Rokeach dogmatism	-.75
10 college humanities majors	Rokeach dogmatism	-.03
Gutkin & Suls, 1976		
68 college Ss	Hogan's Survey of Ethical Attitudes	-.27
Morrison, Toews, & Rest, 1973	Portune's Attitudes Towards Police	-.13
	Political tolerance	-.08
71 junior highs	Political efficacy (I)	-.13
	Participation	.12
	Political Trust	.07
	Political efficacy (II)	.17
	Civic tolerance	.10
	Political interest	.11
	Rokeach Dogmatism	-.28
Rest, 1975		
88 high school Ss	Political tolerance	.21
Rest, Ahlgren, & Mackey, 1973	Portune Attitudes Towards Police	-.37
	Political tolerance	.12
	Political efficacy	-.17
61 junior highs	Copo-Polo Scale	
	-view police as helpful	.23
	-angry feelings towards police	.15
	-attribute concern to police	-.10
Rest & Feldman, 1973	Political efficacy	.04
160 students	Political activity	-.19
	Political positiveness	-.34